Hospitalizations Among Cases with the Most Common Serotypes of Salmonella: FoodNet, 1996 - 2000.

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Background: *Salmonella* is a leading cause of gastrointestinal illness in the United States. Although there are over 2000 known serotypes of *Salmonella*, four serotypes account for the majority of reported infections. This analysis assessed severity of illness among the major serotypes of *Salmonella* cases reported to the Centers for Disease Control and Prevention's Foodborne Disease Active Surveillance Network (FoodNet), as measured by hospitalization rates and duration.

Methods: A case of salmonellosis was defined as the isolation of a Salmonella species from any clinical source in a resident of the FoodNet catchment area during the years 1996-2000. In 1996, the catchment area included Minnesota, Oregon, and selected counties in California, Connecticut, and Georgia; subsequently, selected counties in New York, Maryland (1998) and Tennessee (1999) were added. The top four reported Salmonella serotypes were abstracted from the data set and analyzed for hospitalization and length of hospital stay. The median duration of hospitalization was calculated for each serotype and the proportion of hospitalized cases was compared, by serotype, using the chi-square test.

Results: Between 1996 and 2000, 15,931 cases of *Salmonella* infection were reported to FoodNet. One hundred ninety-two cases with incomplete hospitalization data were excluded from this analysis. Of the 15,739 remaining, 2671 (17%) were hospitalized. Four *Salmonella* serotypes (*S*. Typhimurium, *S*. Enteriditis, *S*. Heidelberg, and S. Newport) comprised 53% of the hospitalized cases. Hospitalized patients with one of these serotypes had a median hospital stay of 3 days (range 1-157). *S*. Typhimurium accounted for 4015 (26%) cases; 778 (19%) were hospitalized and had a median hospital stay of 3 days. There were 2144 (14%) cases of *S*. Enteriditis; of which 322 (15%) were hospitalized with a median hospital stay of 4 days. *S*. Heidelberg represents 961 (6%) cases; 207 (22%) were hospitalized and had a median hospital stay of 4 days. There were 1045 (7%) cases of *S*. Newport, of which 102 (10%) were hospitalized with a median hospital stay of 3 days.

Conclusion: The propensity of individual Salmonella serotypes to cause hospitalization among residents of FoodNet sites varies, ranging from 10% (*S*. Newport) to 22% (*S*. Heidelberg). However, the median duration of hospitalization among cases infected with the most frequent serotypes of *Salmonella* is similar, suggesting similar recovery rates independent of the serotype causing infection. Further studies are needed to determine reasons for the elevated hospitalization rates between S. Heidelberg and S. Typhimurium

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